

REVISED VERSION

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/004858 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 31/37**,  
35/78, 31/70, 31/7048, 7/48, A61P 17/00

(21) International Application Number:  
PCT/EP2004/007375

(22) International Filing Date: 6 July 2004 (06.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
MI2003A001427 11 July 2003 (11.07.2003) IT

(71) Applicant (for all designated States except US): **INDENA**  
S.P.A. [IT/TT]; Via Ortles, 12, I-20139 Milano (IT).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BOMBARDELLI**,  
Ezio [IT/TT]; Via Val di Sole, 22, I-20141 Milano (IT).

(74) Agents: **BIANCHETTI**, Giuseppe et al.; Via Plinio, 63,  
I-20129 Milano (IT).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the revised international search  
report: 10 March 2005

**(15) Information about Correction:**

see PCT Gazette No. 10/2005 of 10 March 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: COMBINATIONS OF VASOACTIVE AGENTS, THEIR USE IN THE PHARMACEUTICAL AND COSMETIC  
FIELD, AND FORMULATIONS CONTAINING THEM

(57) Abstract: This invention relates to combinations of vasoactive substances which act at venous or arterial level with phosphodi-  
esterase inhibitors including phosphodiesterase V, in particular: visnadin or esculoside; at least one compound selected from icarin or  
derivatives thereof or extracts containing it, Ginkgo biloba dimeric flavones either in the free form or complexed with phospholipids,  
amentoflavone; at least one compound selected from escin, escin beta-sitosterol complexed with phospholipids, sericoside, serico-  
side complexed with phospholipids or Centella asiatica extract in the free form or complexed with phospholipids. The formulations  
according to the invention are useful in reducing parmiculopathy and problems associated with venous insufficiency of the lower  
limbs.

WO 2005/004858 A1

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/004858 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 31/37**,  
35/78, 31/70, 31/7048, 8/97, A61Q 19/06, A61P 17/00

(21) International Application Number:  
PCT/EP2004/007375

(22) International Filing Date: 6 July 2004 (06.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
MI2003A001427 11 July 2003 (11.07.2003) IT

(71) Applicant (for all designated States except US): **INDENA**  
S.P.A. [IT/IT]; Via Ortles, 12, I-20139 Milano (IT).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BOMBARDELLI**,  
Ezio [IT/IT]; Via Val di Sole, 22, I-20141 Milano (IT).

(74) Agents: **BIANCHETTI**, Giuseppe et al.; Via Plinio, 63,  
I-20129 Milano (IT).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: COMBINATIONS OF VASOACTIVE AGENTS, THEIR USE IN THE PHARMACEUTICAL AND COSMETIC  
FIELD, AND FORMULATIONS CONTAINING THEM

(57) Abstract: This invention relates to combinations of vasoactive substances which act at venous or arterial level with phosphodi-  
esterase inhibitors including phosphodiesterase V, in particular: visnadin or esculoside; at least one compound selected from icarin or  
derivatives thereof or extracts containing it, Ginkgo biloba dimeric flavones either in the free form or complexed with phospholipids,  
amentoflavone; at least one compound selected from escin, escin beta-sitosterol complexed with phospholipids, sericoside, serico-  
side complexed with phospholipids or Centella asiatica extract in the free form or complexed with phospholipids. The formulations  
according to the invention are useful in reducing paresthesia and problems associated with venous insufficiency of the lower  
limbs.

WO 2005/004858 A1